

REMARKS

Introduction

Claims 1-13, 15-19, 24, 29, 30 and 47 have been amended. Claims 31-39 and 43-46 have been cancelled. The application now includes claims 1-13, 15-27, 29, 30 and 47.

Applicants thank the Examiner for taking the time to conduct a personal interview with the Applicants' representative on October 8, 2008.

Reconsideration of the rejection is respectfully requested in view of the claim amendments and following remarks.

IDS Issues

The Examiner objected to the information disclosure statement filed September 21, 2007 because it failed to comply with 37 CFR 1.98(a)(2) because, initially, no copies of non-patent literature documents numbered 108-115 (and the two unnumbered documents following 115) had been received. These copies were submitted with the reply dated June 25, 2008, but a new IDS was not submitted. In response, a new IDS and form 1449 for the references submitted on June 25, 2008 is filed herewith.

The Examiner has further objected to the IDS because "relevant pages of the publication must be specified". Applicants respectfully disagree that relevant pages of the non-patent literature have not been specified. For many of the references, relevant pages were identified. For example, for the previously cited document entitled "HP Application Server Developer's Guide . . . " by HP,

relevant pages 27-81, 127-160 and 195-271 are cited. Further, for previously cited document entitled "ARIES: A Transaction Recovery Method . . ." by Mohan et al., relevant pages 94-162 are cited. For some references, no specific pages are cited but instead the entire reference is cited. For example, for references MICROSOFT, "Microsoft Framework" and WILLINK, "Meta-Compilation for C++" all pages of the reference are cited. However, in these cases when no specific pages are cited, the reference is being submitted merely as a background reference and there are no specific pages of the reference that are more relevant than others.

Based on the foregoing, applicants request that all objections to the IDSs be withdrawn and all cited references be considered.

Abstract Issue

The Abstract is objected to. In response, and in accordance with the Examiner's suggestion, the last four sentences of the Abstract have been deleted. Reconsideration of the objection is respectfully request.

The Claimed Invention is Directed to Statutory Subject Matter

All pending claims are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Specifically, the Examiner states that claims 1-13, 15-18 and 45 set forth systems comprising claim language that appears to make all functional steps optional and claims 19-27, 29-39, 41, 42, 46, 47 are directed to merely abstract ideas. In response, the claims have been amended to remove

optional functional steps and to recite a tangible result (e.g., for claim 19, the tangible result is an automatically created security type). Reconsideration of the rejection is respectfully requested.

The Claims are No Longer Indefinite

Claims 6 and 11-13 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for including trademarked names. In response, the claims have been amended. Reconsideration of the rejection is respectfully requested.

The Claims are Allowable over the Prior Art Because the Prior Art Fails to disclose using Annotated Source Code to Automatically Creates Web Services Security and Interceptors

Claims 1-13, 15-27, 29-39, 41, 42 and 45-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bau, III et al. (U.S. Pat. Pub. No. 2003/0005181, "Bau") in view of Beged-Dov et al. (U.S. Pat. Pub. No. 2002/0174241, "Beged-Dov"). Reconsideration of these rejections is respectfully requested because the prior art fails to disclose using annotated source code and a compiler to automatically creates Web service security and interceptors.

One embodiment of the invention is a system for developing components for Web services or "network accessible services". The system includes a compiler that compiles augmented source code. The compiler then generates one or more object files, software components and deployment descriptors to facilitate the automated deployment of Web services. See e.g., ¶ 27 of the present application. The augmented source code may include code to

automatically create different types of security that can be applied to, for example, request messages, callbacks or response messages, or requests and callbacks originating with intermediate services in a chain. See e.g., ¶ 79 of the present application. Further, the augmented source code may include code to automatically develop message interception and transformation capabilities for Web services. The Interceptors allow developers to apply their own pre and post processing methods to Web service messages.

Bau discloses an annotation base development platform for asynchronous Web services. Code for enhanced Web services are created with an enhanced compiler and annotated source code. For example, code may be automatically generated to manage state associated with multiple, simultaneous conversations, or for managing one or more asynchronous transactions. See e.g., ¶ 30 of Bau. However, Bau fails to disclose automatically generating security types or Interceptors for Web services.

Beged-Dov discloses an Internet clipboard service that functions as a Web service. Beged-Dov, as indicated by the Examiner, discloses at least one type of security for a Web services – e.g., the end user is required to authenticate himself to the Destination Web Service. See ¶ 19 of Beged-Dov. Applicants disagree with the Examiner that Beged-Dov discloses an Interceptor as defined by the present invention (i.e., a mechanism for applying pre and post processing methods to Web service messages). Beged-Dov merely discloses the functionality of intercepting a user's request while interfacing with a Web service.

However, even accepting the argument that Beged-Dov discloses security types and Interceptors for Web services, the novelty of embodiments of the present invention is how such security types and Interceptors are generated/created. Embodiments allow security types and interceptors to be automatically generated using annotated code and an enhanced compiler. The invention of automatically generating security types and interceptors is extensively disclosed and enabled in ¶¶ 79-244 of the present application.

One of ordinary skill in the art would not combine Bau and Beged-Dov because there is a complete absence of any teachings that security types and Interceptors would be the type of functionality that could be automatically generated through the use of an enhanced compiler and annotated source code. Further, even if motivation existed, there is a complete absence of how such a combination would be enabled. Bau only discloses creating Web services, not security types or Interceptors for the Web services. Beged-Dov teaches away from automatically generating security types by disclosing an additional mechanism (the "Trusted Internet Clipboard") for providing secure transfers of resources, rather than using an enhanced compiler to automatically generate security types. The Examiner has failed to point to any disclosure in any cited prior art that would provide the motivation or that would provide how any references can be combined technically to arrive at the claimed invention.

In contrast to the cited prior art, amended independent claim 1 recites an "enhanced compiler" that will "automatically create, deploy and manage at least one security type using a specification provided by the annotated source code".

Amended Independent claim 19 recites similar limitations. Amended independent claim 47 similarly recites "automatically create an interceptor using a specification provided by the annotated source code".

For at least these reasons, amended independent claims 1, 19 and 47 should be allowable over the cited prior art. The remaining claims depend from either claims 1 and 19, and should also be allowable for at least the above reasons.

Conclusion

Applicants respectfully request favorable action in connection with this application.

The Examiner is invited and urged to contact the undersigned to discuss any matter concerning this application.

A one-month extension of time is due for this submission. Should any additional fees be required, the Commissioner is authorized to charge any such fee to Womble Carlyle's Deposit Account No. 09-0528.

Respectfully Submitted,

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